

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

**OFFICE OF DESIGN POLICY & SUPPORT
INTERDEPARTMENTAL CORRESPONDENCE**

FILE P.I. # 0013198
Morgan & Newton Counties
GDOT District 2 - Tennille
Signal Upgrades at 8 Locations

OFFICE Design Policy & Support

DATE 3/14/2016

FROM  Brent Story, State Design Policy Engineer

TO SEE DISTRIBUTION

SUBJECT APPROVED CONCEPT REPORT

Attached is the approved Concept Report for the above subject project.

Attachment

DISTRIBUTION:

Hiral Patel, Director of Engineering
Joe Carpenter, Director of P3/Program Delivery
Genetha Rice-Singleton, Assistant Director of P3/Program Delivery
Albert Shelby, State Program Delivery Engineer
Darryl VanMeter, State Innovative Delivery Engineer
Bobby Hilliard, Program Control Administrator
Cindy VanDyke, State Transportation Planning Administrator
Eric Duff, State Environmental Administrator
Bill DuVall, State Bridge Engineer
Andrew Heath, State Traffic Engineer
Angela Robinson, Financial Management Administrator
Lisa Myers, State Project Review Engineer
Charles "Chuck" Hasty, State Materials Engineer
Lee Upkins, State Utilities Engineer
Richard Cobb, Statewide Location Bureau Chief
James Smith, District Engineer
Jaime Lindsey, District Utilities Engineer
Frank Childs, Project Manager
BOARD MEMBER - 4th & 10th Congressional District

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
LIMITED SCOPE PROJECT CONCEPT REPORT**

Project Type:	<u>Reconstruction/ Rehabilitation</u>	P.I. Number:	<u>0013198</u>
GDOT District:	<u>District 2</u>	County:	<u>Morgan & Newton</u>
Federal Route Number:	<u>US 129, 278, 441</u>	State Route Number:	<u>11, 24, 24BY, 36, 81</u>
	Project Number: _____		

SR 11; SR 24; SR 24 BY; SR 36 & SR 81 @ 8 LOCS - SIGNAL UPGRADE

Submitted for approval:

<u>Kath Patricia</u> Kath Patricia FIT Atkins		<u>12/04/2015</u> Date
<u>Albert Shelby</u> State Program Delivery Engineer	<u>SNB</u>	<u>12/14/15</u> Date
<u>Frank Childers</u> GDOT Project Manager	<u>CCB</u>	<u>12/10/15</u> Date

Recommendation for approval:

* <u>HIRAL PATEL</u> State Environmental Administrator		<u>12/19/2015</u> Date
* <u>KEN WERHO</u> State Traffic Engineer		<u>12/22/2015</u> Date

- MPO Area: This project is consistent with the MPO adopted Regional Transportation Plan (RTP)/Long Range Transportation Plan (LRTP).
- Rural Area: This project is consistent with the goals outlined in the Statewide Transportation Plan (SWTP) and/or is included in the State Transportation Improvement Program (STIP).

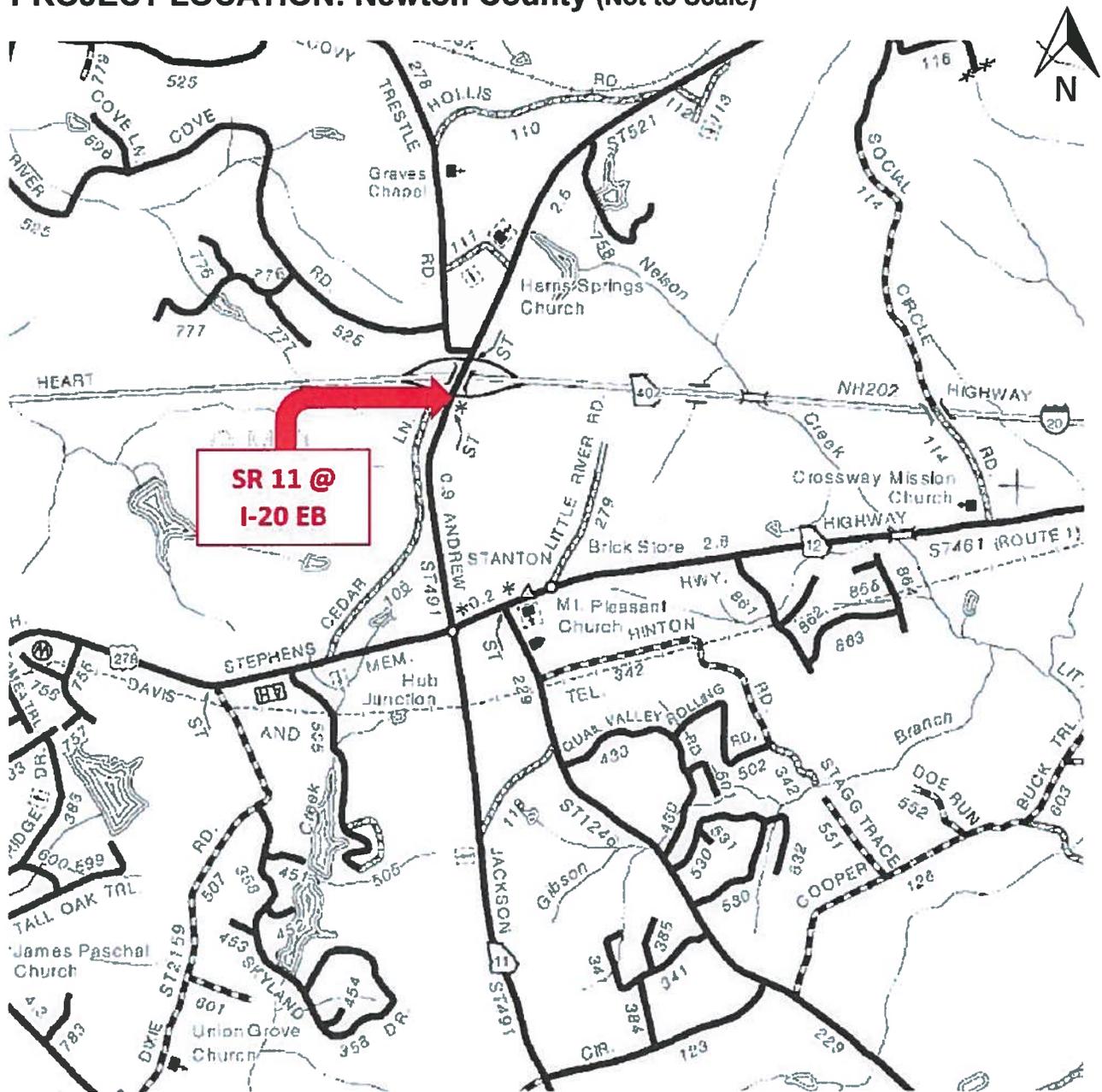
* <u>CYNTHIA L VANDYKE</u> State Transportation Planning Administrator		<u>1-7-2016</u> Date
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Approval:

Concur: <u>Hiral Patel</u> GDOT Director of Engineering		<u>2-25-2016</u> Date
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Approve: <u>Margaret B. Pirkle</u> GDOT Chief Engineer		<u>3.10.16</u> Date
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PROJECT LOCATION: Newton County (Not to Scale)



PLANNING & BACKGROUND DATA

Project Justification Statement: There are five (5) signalized intersections in Morgan County and three (3) signalized intersections in Newton County in need of improvements to address compliance with current GDOT standards and the Manual on Uniform Traffic Control Devices (MUTCD) and the requirements of the Americans with Disabilities Act (ADA). The proposed project will enhance efficiency for vehicular and pedestrian movements at several locations by providing upgraded traffic signal equipment and pedestrian platforms, energy saving LED signal heads, wheelchair ramps, pedestrian signals, and crosswalk striping.

The intersections listed in Table 1 have been identified by The Office of Traffic Operation as high priority for minor intersection improvements. Table 1 also shows the reason the District has identified these intersections to be upgraded. The proposed project is to be included in the Region Wide Signal Upgrade Lump Sum Program.

Table 1: Intersection Upgrade Needs

County	City	Primary Route	Intersecting Road	Reason for Upgrade
Morgan	Madison	SR 24 Madison Bypass	SR 12	Obsolete Equipment/ADA
Morgan	Madison	SR 24 Madison Bypass	East Drive	Obsolete Equipment/ADA
Morgan	Madison	SR 24	Madison Bypass	Obsolete Equipment/ADA
Morgan	Madison	SR 24	I-20 WB	Obsolete Equipment/ADA
Morgan	Madison	SR 24	I-20 EB	Obsolete Equipment/ADA
Newton	Social Circle	SR 11	I-20 EB	Obsolete Equipment/ADA
Newton	Covington	SR 81	Soule Street	Obsolete Equipment/ADA
Newton	Covington	SR 36	Covington Bypass Rd	Obsolete Equipment/ADA

Existing conditions:

- SR 24 Madison Bypass – at the intersection of SR 12 – is a four-lane roadway with 13-foot lanes, left turn lanes, and a right turn lane onto SR 12 EB.
- SR 24 Madison Bypass – at the intersection of East Dr – is a four-lane roadway with 13-foot lanes, offset left turn lanes, and right turn lanes.
- SR 24 – at the intersection of Madison Bypass – is a two-lane roadway with 14-foot lanes, left turn lanes, and a right turn lane onto SR 24 Madison Bypass EB.
- SR 24 – at the intersection of I-20 Westbound – is a four-lane roadway with 12-foot lanes, left turn and right turn lanes onto I-20 Westbound Entrance Ramp, and a striped median on the north leg of the intersection.
- SR 24 – at the intersection of I-20 Eastbound – is a four-lane roadway with 12-foot lanes, left turn and right turn lanes onto I-20 Eastbound Entrance Ramp, and a striped median on the south leg of the intersection.
- SR 11 – at the intersection of I-20 Eastbound – is a three-lane roadway (two-lanes northbound, one-lane southbound) with 12-foot lanes, a left turn lane onto I-20 Eastbound Entrance Ramp, and a striped median on the south leg of the intersection.
- SR 81 – at the intersection of Soule St – is a two-lane roadway with 12-foot lanes.
- SR 36 – at the intersection of Covington Bypass Rd – is a two-lane roadway with 12-foot lanes and left turn lanes.

Other projects in the area:

- 0009832 – SR 24 Bypass @ CR 252/Bethany Road – This project proposes to construct an R-Cut at this intersection.
- 0013259 – SR 12; SR 15; SR 24 Bypass; SR 36 & SR 162 @ 5 LOC – Ped Upgrades

County: Morgan & Newton

- 0013617 – SR 24 FM Madison Bypass/Morgan to N of Apalachee Rvr/Oconee – This project is for widening of SR 24/US 441 to 4 lanes from the Madison Bypass to just north of the Apalachee River.
- 0013785 – Off-System Safety Improvements @ 5 Locs in Morgan County
- M004708 – SR 36 from Butts County Line to CR 653/Covington Bypass Rd – This project is the resurfacing of SR 36. This section of SR 36 needs resurfacing because the existing pavement is deteriorating. SR 36 was last resurfaced in 1998.
- M004936 – SR 24 from Putnam County Line to I-20 – This section of SR 24 has met the criterior for resurfacing due to deterioration of existing pavement through the COPACES ratings.
- M005197 – I-20 from NS #733146T/Morgan to SR 44/Greene – Maintenance

Description of the proposed project: The project will upgrade equipment, accommodate pedestrians, and update pedestrian facilities to meet current ADA standards at the following intersections:

- SR 24 Madison Bypass @ SR 12 (Morgan County)
- SR 24 Madison Bypass @ East Dr (Morgan County)
- SR 24 @ Madison Bypass (Morgan County)
- SR 24 @ I-20 WB (Morgan County)
- SR 24 @ I-20 EB (Morgan County)
- SR 11 @ I-20 EB (Newton County)
- SR 81 @ Soule St (Newton County)
- SR 36 @ Covington Bypass Rd (Newton County)

The standard project limits will be 200 feet from the center point of the intersection; should setback loops need replacement, the project limits will be 500 feet from the center point of the intersection. If setback loops are present, the survey should include the edge of pavement and property lines to the setback loop. Standard erosion control details should be used. Traffic studies are not needed for this project. The scope of this project will be limited to equipment upgrades, pedestrian accommodations, and updating pedestrian facilities to meet ADA standards.

MPO: Atlanta Regional Commission (ARC)

TIP #: N/A

TIA Regional Commission: Not a TIA Project

MPO Name Congressional District(s): 4 & 10

Federal Oversight: Exempt State Funded Other

Projected Traffic: N/A 24 HR T: N/A
Current Year (20WW): N/A **Open Year (20XX):** N/A **Design Year (20YY):** N/A
Traffic Projections Performed by: N/A

Functional Classification (Mainline):

- SR 24 Madison Bypass & SR 24 – Rural Principal Arterial
- SR 11 – Rural Minor Arterial
- SR 81 – Urban Minor Arterial
- SR 36 – Urban Principal Arterial

Complete Streets - Bicycle, Pedestrian, and/or Transit Standards Warrants:

Warrants met: None Bicycle Pedestrian Transit

Pavement Evaluation and Recommendations

Preliminary Pavement Evaluation Summary Report Required? No Yes
Preliminary Pavement Type Selection Report Required? No Yes
Feasible Pavement Alternatives: HMA PCC HMA & PCC

DESIGN AND STRUCTURAL

Description of Proposed Project:

Major Structures: N/A

Mainline Design Features:

SR 24 Madison Bypass – Rural Principal Arterial

No design changes will be made under this project.

SR 24 – Rural Principal Arterial

No design changes will be made under this project.

SR 11 – Rural Minor Arterial

No design changes will be made under this project.

SR 81 – Urban Minor Arterial

No design changes will be made under this project.

SR 36 – Urban Principal Arterial

No design changes will be made under this project.

Major Interchanges/Intersections:

- SR 24 Madison Bypass @ SR 12
- SR 24 @ I-20 EB
- SR 24 @ I-20 WB
- SR 11 @ I-20 EB

Lighting required: No Yes

Transportation Management Plan [TMP] Required: No Yes
If Yes: Project classified as: Non-Significant Significant
TMP Components Anticipated: TTC TO PI

Will Context Sensitive Solutions procedures be utilized? No Yes

Design Exceptions to FHWA/AASHTO controlling criteria anticipated: None

Design Variances to GDOT Standard Criteria anticipated: None

UTILITY AND PROPERTY

Temporary State Route Needed: No Yes Undetermined

Railroad Involvement: None

Utility Involvements:

- ANS Connect (Communications)
- AT&T Distribution (Communications)
- AT&T Transmission (Communications)
- Central Georgia EMC (Electric)
- Charter Communications (Communications)
- City of Covington (Gas, Electric, Water, Sewer)
- City of Madison (Gas, Water, Sewer)
- City of Oxford (Electric, Water, Sewer)

COORDINATION, ACTIVITIES, RESPONSIBILITIES, AND COSTS

Project Meetings: Project Kick-Off Meeting 08/04/2015. Meeting minutes attached.

Project Activity	Party Responsible for Performing Task(s)
Concept Development	Atkins
Design	Atkins
Right-of-Way Acquisition	GDOT
Utility Coordination (Preconstruction)	GDOT
Utility Relocation (Construction)	Utility Owners
Letting to Contract	GDOT
Construction Supervision	GDOT
Providing Material Pits	N/A
Providing Detours	N/A
Environmental Studies, Documents, & Permits	Atkins/GDOT
Environmental Mitigation	N/A
Construction Inspection & Materials Testing	GDOT

Other coordination to date: Kickoff Meeting 08/04/2015

Project Cost Estimate and Funding Responsibilities:

	Breakdown of PE	ROW	Reimbursable Utility	CST*	Environmental Mitigation	Total Cost
Funded By	GDOT	GDOT	GDOT	GDOT	N/A	
\$ Amount	\$343,457.10	\$230,000.00	N/A	\$1,420,811.58	N/A	
Date of Estimate	06/18/2015			12/04/2015	N/A	

*CST Cost includes: Construction, Engineering and Inspection, and Contingencies.

ALTERNATIVES DISCUSSION

No-Build Alternative:			
Estimated Property Impacts:	N/A	Estimated Total Cost:	N/A
Estimated ROW Cost:	N/A	Estimated CST Time:	N/A
Rationale: Does not fulfill the objectives of the Project Justification Statement.			

Comments/Additional Information: None

LIST OF ATTACHMENTS/SUPPORTING DATA

1. Revisions to Program Costs
2. Cost Estimate
3. Kick-Off Meeting Minutes

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**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE P.I. No. 13198 **OFFICE** Program Delivery

PROJECT DESCRIPTION

SR 11; SR 24; SR 24 BY; SR 36 & SR 81 @ 8 LOCS IN MORGAN & NEWTON COUNTIES - SIGNAL UPGRADES

DATE December 4, 2015

From: Albert Shelby, PE, State Program Delivery Engineer

To: Lisa L. Myers, State Project Review Engineer

Subject: REVISIONS TO PROGRAMMED COSTS

PROJECT MANAGER Frank Childs **MGMT LET DATE** 1/15/2019
MGMT ROW DATE 10/15/2017

PROGRAMMED COSTS (TPro W/OUT INFLATION)

LAST ESTIMATE UPDATE

CONSTRUCTION	\$	1,250,000.00	DATE	
RIGHT OF WAY	\$	230,000.00	DATE	
UTILITIES	\$		DATE	

REVISED COST ESTIMATES

CONSTRUCTION*	\$	1,420,811.58
RIGHT OF WAY	\$	230,000.00
UTILITIES	\$	

*Cost Contains 5 % Contingency

REASONS FOR COST INCREASE AND CONTINGENCY JUSTIFICATION:

Original project cost was the programming estimate. Updated construction cost estimate was determined using knowledge from the kick-off meeting field visit and proposed work to intersections. Right-of-way costs remain unchanged at this time since it's too early in the project schedule to determine a revised right-of-way cost estimate.

CONTINGENCY SUMMARY

A. CONSTRUCTION COST ESTIMATE:	\$	1,288,717.99	Base Estimate From CES
B. ENGINEERING AND INSPECTION (E & I):	\$	64,435.90	Base Estimate (A) x 5 %
C. CONTINGENCY:	\$	67,657.69	Base Estimate (A) + E & I (B) x 5 % See % Table in "Risk Based Cost Estimation" Memo
D. TOTAL LIQUID AC ADJUSTMENT:	\$	0.00	Total From Liquid AC Spreadsheet
E. CONSTRUCTION TOTAL:	\$	1,420,811.58	(A + B + C + D = E)

REIMBURSABLE UTILITY COSTS

UTILITY OWNER	REIMBURSABLE COST
TOTAL	\$ -

ATTACHMENTS:

Detailed Cost Estimate Printout From TRAQS

JOB DETAIL ESTIMATE

JOB NUMBER : 0013198
DESCRIPTION: SR 11; SR 24; SR 24; SR 24 BY; SR 36 & SR 81 @ 8 LOCS - SIGNAL UPGRADE

ITEMS FOR JOB 0013198

LINE	ITEM	ALT	UNITS	DESCRIPTION	QUANTITY	PRICE	AMOUNT
0005	150-1000		LS	TRAFFIC CONTROL - 0013198	1.000	117156.18	117156.18
0010	163-0232		AC	TEMPORARY GRASSING	1.000	667.52	667.52
0015	163-0240		TN	MULCH	10.000	193.96	1939.67
0020	441-0108		SY	CONC SIDEWALK, 8 IN	800.000	61.73	49390.18
0025	441-6222		LF	CONC CURB & GUTTER/ 8X30 TP2	320.000	24.61	7878.10
0030	636-1020		SF	HWY SGN,TP,IMAT,REFL SH TP3	250.000	13.51	3378.61
0035	636-1041		SF	HWY SIGNS,TP 2MAT,REFL SH TP 9	900.000	30.36	27332.69
0040	639-4004		EA	STRAIN POLE, TP IV	32.000	7432.69	237846.38
0045	647-1000		LS	TRAF SIGNAL INSTALLATION NO - 1	1.000	90000.00	90000.00
0050	647-1000		LS	TRAF SIGNAL INSTALLATION NO - 2	1.000	90000.00	90000.00
0055	647-1000		LS	TRAF SIGNAL INSTALLATION NO - 3	1.000	90000.00	90000.00
0060	647-1000		LS	TRAF SIGNAL INSTALLATION NO - 4	1.000	90000.00	90000.00
0065	647-1000		LS	TRAF SIGNAL INSTALLATION NO - 5	1.000	90000.00	90000.00
0070	647-1000		LS	TRAF SIGNAL INSTALLATION NO - 6	1.000	90000.00	90000.00
0075	647-1000		LS	TRAF SIGNAL INSTALLATION NO - 7	1.000	90000.00	90000.00
0080	647-1000		LS	TRAF SIGNAL INSTALLATION NO - 8	1.000	90000.00	90000.00
0090	653-0120		EA	THERM PVMT MARK, ARROW, TP 2	21.000	81.17	1704.57
0095	653-1501		LF	THERMO SOLID TRAF ST 5 IN, WHI	1200.000	0.64	770.15
0100	653-1502		LF	THERMO SOLID TRAF ST, 5 IN YEL	600.000	0.60	363.86
0105	653-1704		LF	THERM SOLID TRAF STRIPE,24,WH	1000.000	6.61	6611.94
0110	653-1804		LF	THERM SOLID TRAF STRIPE, 8,WH	4000.000	2.39	9579.08
0115	682-6233		LF	CONDUIT, NONMETL, TP 3, 2 IN	5680.000	5.00	28400.00
0120	682-9950		LF	DIRECTIONAL BORE - 3 IN	3280.000	9.00	29520.00
0125	682-9950		LF	DIRECTIONAL BORE - 5 IN	2400.000	15.00	36000.00
0135	700-6910		AC	PERMANENT GRASSING	1.000	1016.78	1016.79
0140	700-7000		TN	AGRICULTURAL LIME	8.000	90.96	727.70
0145	700-8000		TN	FERTILIZER MIXED GRADE	8.000	605.22	4841.77
0150	700-8100		LB	FERTILIZER NITROGEN CONTENT	200.000	4.18	836.80
0155	713-3011		SY	WOOD FIBER BLANKET, TP I, SHOULDERS	5300.000	0.52	2756.00

ITEM TOTAL 1288718.00
INFLATED ITEM TOTAL 1288717.99

TOTALS FOR JOB 0013198

ESTIMATED COST: 1288717.99
CONTINGENCY PERCENT (0.0): 0.00
ESTIMATED TOTAL: 1288717.99

Meeting Minutes

Project:	0013198		
Subject:	Kickoff Meeting Minutes		
Date and time:	4 August 2015 – 9:00am	Meeting no:	1
Meeting place:	Field	Minutes by:	Casey Huskey/ Kaitlin Potnick
Present:	Ray Spires Joey Shurling Matthew Sammons Jamie Lindsey Justin Hatch Cynthia Burney Bruce Anderson Jr. Kaitlin Potnick Casey Huskey	Representing:	GDOT GDOT GDOT GDOT GDOT GDOT GDOT Atkins Atkins

MINUTES

SR 24 Madison Bypass @ SR 12

Taller strain poles

Prefer mast arms, if possible. Use if arm length can be under 65 ft.

Relocate signal cabinet to NW corner (332 quad)

Place light on pole on cabinet location

Keep battery backup system

Lighted street signs

Speed Limit: 55 mph all approaches, except EB is 45 mph

Existing advance warning signs on North leg, SB approach.

For North leg/SB approach, install advance warning on mast arm, 2 single signal heads with prepare to stop signs. Lights on mast arm to flash when signal for SB approach goes to yellow.

Bore to cabinet from advance warning locations

Move strain pole from SW corner to island, if possible, due to access

Move strain poles to islands, if clearances allow.

Try to avoid strain pole in SE corner due to steep drop behind guardrail.

Protected left turns exist on all approaches.

Power lines run E/W on north side of intersection.

Install ADA ramps/pads.

NOTE TO RECIPIENTS:

These meeting notes record Atkins understanding of the meeting and intended actions arising therefrom. Your agreement that the notes form a true record of the discussion will be assumed unless adverse comments are received in writing within five days of receipt.

SR 24 @ East Drive

Advance Warning (same as previous intersection) for SB approach. Mount on mast arms.

Bore advance warning to cabinet

Cabinet on NW corner- upgrade to 332 4door quad cabinet

Box span configuration.

Power pole is currently joint use. Do not design as joint use pole.

NW corner, power company is going to have to move. Remove timber pole, new concrete pole.

Install crosswalks for all legs of the intersection.

All new concrete strain poles

Remove striped right turn islands.

Main line 55 mph

Check R/W, appears to have plenty

Check striped left turn islands, may have to pull back for side street left turns

Power lines low E/W on north leg of intersection

Red light ahead signs on all approaches

Install ADA ramps/pads.

SR 24 @ Madison Bypass

Mast arm, if possible, due to potential overhead utility conflicts

Install 3 new concrete poles if mast arms are not feasible.

Potential joint use pole on SE corner, if possible, replace timer poles w/ concrete

Joint use exists in NW corner

SW corner pole needs to move closer to road to avoid power line conflict.

If mast arms are not feasible, try to replace joint use in NE and SE quadrants in relatively the same locations as existing poles. Verify these pole locations produce acceptable box span.

Move cabinet to SW corner. Install 332 quad cabinet

Remove striped islands

FYA on all approaches

Check striping and delineators on EB approach

Install ADA ramps/pads.

SR 24 @ I-20 WB

Relocate cabinet to SE corner

Keep 3 concrete poles, install new concrete pole on SW corner

Install FYA for NB approach

Ok to not install crosswalk on inner leg, make sure to install appropriate signs in accordance with the MUTCD (no cross, use cross walk with arrow)

Advance pulse loops on edge of road after bridge for NB approach

Wireless from WB ramp to EB ramp

Mainline speed limit is 45 mph

“Bulb out” striping to remain.

Install ADA ramps/pads.

SR 24 @ I-20 EB

Install FYA for SB approach

Ok to not install crosswalk on inner leg, make sure to install appropriate signs in accordance with the MUTCD (no cross, use cross walk with arrow)

Keep all existing concrete poles

Wireless from WB ramp to EB ramp.

Install ADA ramps/pads.

SR 11 @ I-20 EB

New pole on NW corner only

New chicken tracks and striping

Upgrade right turn island. ADA ramps, ped heads, push buttons, etc.

Put ped heads and push buttons in right turn island.

No FYA

Possible ADA ramp conflict on SE corner, guardrail exist w/o much room; slope

4th leg w/o crosswalk is ok at ramp locations. The inside leg doesn’t need to be striped, but must be properly signed in accordance with MUTCD.

Verify if the poles that will remain will be able to hold 2 spans temporarily until the existing/old span can be removed after new span gets installed

Install ADA ramps/pads.

SR 36 @ Covington Bypass Rd

Install all new poles

Install cabinet in same corner as existing (SW corner)

Install FYA in all approaches

Advance warning on mast arms, Red light ahead, W3-3 on pole, signal ahead for NB approach

Red light ahead signs on 3 approaches

Potential utility conflicts

Install crosswalks for all legs of the intersections.

Install ADA ramps/pads.

Remove striped right turn island. Install raised island.

SR 81 @ Soule Street

Existing joint use pole in SW corner

No FYAs

New cabinet in SW corner, if no utility conflicts

If utility conflicts exist, install 1 diagonally mast arm from NE corner

Lots of utilities on SW corner

Check R/W on NW corner... existing pole may be out of R/W

Add crosswalks for other approaches

Speed Limit for East and West approaches is 25 mph

Speed Limit for North and South approaches is 35 mph

Sewer and water is in SW quad manhole and BS makers exist

Gas line runs N/S on west side of intersection

School zone, new school zone signs

Install crosswalk for all legs at the intersection.

Install ADA ramps/pads.